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The Lack of Dental Ethics Education in the Undergraduate Curricula in Dental Schools of Serbian Universities

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Abstract

Although dental ethics has already established itself as an essential and independent discipline structured on the contemporary problems in dentistry, one can still bear the opinion that teaching ethics is not necessary since it is nothing more than a matter of common sense and conscience. In clinical practice, however, common sense is not a universal “phenomenon,” and there are plenty of occasions where conscience is not enough, and doctors could put themselves into serious legal difficulties. This paper will discuss these issues as applied in the undergraduate curricula in dental schools of Serbian universities.

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THE LACK OF DENTAL ETHICS EDUCATION IN THE UNDERGRADUATE CURRICULA IN DENTAL SCHOOLS OF SERBIAN UNIVERSITIES

Jelena Roganović¹

INTRODUCTION

Although dental ethics has already established itself as an important and independent discipline structured on the contemporary problems in dentistry, one can still hear the opinion that teaching ethics is not necessary since it is nothing more than a matter of common sense and conscience. In clinical practice, however, common sense is not a universal “phenomenon,” and there are plenty of occasions where conscience is not enough, and doctors could put themselves into serious legal difficulties²

Why is studying dental ethics important nowadays?

Nowadays, more than ever, there is a necessity for guidelines in dental ethics in order to point at the ethical responsibility of everyone working in the dental practice towards patients, each other, as well as towards actions in dental research. In the contemporary dental clinical practice, aesthetic dentistry became a significant branch leading to several ethical issues arising since aesthetic dentistry aims to improve the patient’s

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² Alison Patrick, “A review of teaching ethics in the dental curriculum: challenges and future developments,” *European Journal of Dental Education* 21(2017): e114-e118.

physical appearance without targeting functionality. Aesthetic procedures may involve significant and irreversible harm to the orofacial tissues. For instance, up to 30% of sound hard tissue may be removed for a porcelain veneer preparation, while around 70% of sound tooth structure could be removed during preparation for ceramic crowns in anterior teeth³. Furthermore, a doctor of dental medicine has to clearly differentiate between the health care needs and desires of the patient, make this difference clear to the patient, and work in the best interest of the patient. One should admit however, that in reality, dentistry is a business. Therefore, there is a conflict of interest because the dentist is a doctor, providing health care but also a professional in charge of private practice, tempted to gain more money by recommending a particular expensive procedure, regardless of the best interest of the patient. Noteworthy, not so long ago, it was believed that dentists' integrity and professionalism could not be associated with advertising campaigns. Nowadays, advertising is no longer considered unethical but rather useful in the promotion of oral health and preventive programs. In the light of contemporary ethical demands and challenges, American as well as European Dental Education Associations recognized the necessity of preparing dental students for solving the ethical dilemmas in order to develop competence and to apply ethical and legal standards in the daily dental practice.

Is there a difference between medical and dental ethics?

The great differences between medicine and dentistry lay in the professional goals as well as in the patient's expectations. While professional goals in medicine aim at health per-se, dentistry has to aim also at the patient's psychological being which include the patient's desires. In line with this, the medical doctor is expected to "care" about health while the dentist needs to "satisfy" the patient. Therefore, in medicine, patients are grateful if medical success is achieved, while in dentistry, a patient's dissatisfaction could not be related to oral health issues but rather to a disappointment of a "client" regarding his/her desires fulfilment. Furthermore, the dental patient is often obligated to "buy" dental works such as dental fillings, prosthetic dentures or dental

³ Daniel Edelhoff, John Sorenson, "Tooth structure removal associated with various preparation designs for anterior teeth," *Journal of Prosthetic Dentistry* 87 (2002): 502–509.

crowns, which additionally complicates the situation regarding the patient's dissatisfaction in the dental office.⁴

Regarding legal and practical responsibility, while the responsibility of the medical doctor finishes when he refers the patient to another specialist or health worker, in the dental office, especially in the private clinic, the responsibility is entirely on the dentist. The dental technician, dental hygienist, dental assistants and even anaesthesiologist work under the supervision and direction of the dentist, and the dentist is responsible for their work, even if they are not employed in that particular dental office. In the light of these differences, it seems that ethical demands in medicine and dentistry are not similar.

Nevertheless, the legal liability of medical and dental doctors to their patients is based on the same principles and many ethical issues are identical. For instance, any dental or medical treatment requires informed consent from the patient or legal guardian. Professional confidentiality and respect of the patient's privacy, loyalty to the patient and equality as principal behaviour, comprise some of the most important ethical principles in both medicine and dentistry. Also, medical and dental practices are obliged to keep medical or dental records as well as to obey to legal regulative regarding medical and dental certificates. The patients' rights do not discriminate between medicine and dentistry. Laws are dealing with legal issues arising in all kind of health care institutions and various health care professionals.⁵

DENTAL ETHICS IN CLINICAL PRACTICE

Due to a complex dentist-patient relationship, there are constant and daily, demanding ethical challenges in front of a doctor of dental medicine. In the light of the basic principles of bioethics, including autonomy, beneficence, non-maleficence and justice, the responsibility of the dentist remains demanding.

The principle of autonomy, the patient's right to make a decision independently regarding health, could be challenged in the following situations:

⁴ David Ozar, "Professionalism: challenges for dentistry in the future," *The Journal of Forensic Odonto-stomatology* 30 Suppl 1 (2012):72-84.

⁵ Ibidem.

- When the patient is not sufficiently informed and has no complete understanding of the intervention due to inadequate explanation by the doctor
- When the patient does not understand information due to personal incompetence
- When the personal state, such as intensive pain, influence the patient's understanding of the given information

These examples suggest that an autonomous patient can make a non-autonomous decision and that this principle should be considered an autonomous act rather than an autonomous patient. The dentist is obligated to fully inform the patient about the risks and benefits of each proposed treatment but leaving the patient to make the final decision on the treatment preferred. The patient has a right to truthful information on his/her diagnosis, prognosis and therapy, with all benefits and risks associated with the suggested procedure. However, in contemporary dental medicine, informing the patient may be questionable since a wide range of materials and techniques could be used. It is ethically disputable to recommend a specific expensive procedure, despite the best interest of the patient, in order to gain some profit. In line with this, the involvement of the patient's capacity of payment should be considered; however, it could not be a relevant criterion for proposing "best treatment," especially in the private sector, where most dentists practice.⁶ One should perform procedures with minimal risk and maximum benefit by choosing the minimally invasive procedures, balancing between aesthetics and functioning.

Even if a patient insists, the dentist should not perform certain procedures if that could harm the patient and compromise his/her professional reputation. On the other side, sometimes, the doctor has to respect the patient's decision even if it is not the best solution.

Another major issue includes the refusal to provide dental care to certain patients on discriminatory grounds (e.g. HIV positive status). The justice or justification as an ethical principle holds on the respect of all patients equally, regardless of their gender, nationality, religion or health status. The doctor should always act in the manners of honesty and empathy and give patients what they deserve and have the right on. Principles of confidentiality and loyalty comprise preservation of all

⁶ *Ibidem*.

information regarding the patient's state and treatment along with doing best for the patient with respect to him/her as a person.

DENTAL ETHICS IN THE RESEARCH

Medical and dental research has evolved during the past years in Serbia into fast-developing academic activities aimed to improve both diagnostic and therapeutic procedures. Since medical and dental research involve human participants, these actions must be regulated in order to protect the participants' rights. Namely, clinical trials that involve human participants need to be guided by fundamental ethical principles to ensure the protection of the safety, welfare and autonomy of research participants.⁷ Nevertheless, animal studies also need to be guided by ethical principles based on the protection of animals' welfare. In line with these, international standards mandate the necessary review of research designs and projects by Research Ethics Committees (RECs). In Serbia, institutions where research is done, have their own Ethical committees licensed to review and approve research activities, whether involving human participants or animals.⁸ Dental research is committed to the investigation of the causes and treatment of dental and oral diseases and adheres to the same ethical standards as those valid in medicine. The importance of studying dental research ethics has been emphasized by the studies showing several scientific misconducts in areas of dental research.⁹ Supporting the necessity of dental research ethics continuing learning, surveys among academics show large discrepancies between theoretical and practical knowledge. Namely, in a study by El-Dessouyki and colleagues it was shown that almost 30% of the respondents thought that research performed on blood samples does not need informed consent from the patient. In the same study, almost half of the academic researchers believed that vulnerable subjects (e.g., children and the mentally ill) could provide informed consent to participate in research.¹⁰

⁷ Zorica Vučinić, Ljiljana Djukić, "The Regulation of Clinical Trials in the Republic of Serbia," *Hospital Pharmacology* 2 (2015): 322-327.

⁸ Ibidem.

⁹ Muriel Bebeau, Elizabeth Davis, "Survey of ethical issues in dental research," *Journal of Dental Research* 75 (1996): 845-855

¹⁰ Hadir El-Dessouky, Amr Abdel-Aziz, Chadi Ibrahim, Moni Malini, Reham Abul Fadl, Henry Silverman, "Knowledge, Awareness, and Attitudes about Research Ethics among

Accordingly, the authors suggested compulsory training in ethics for academics, especially regarding informed consent issues, including those issues associated with the sensitive population of the research participants.

Regarding another aspect of research, Eastwood and colleagues found that a small percentage of survey participants- postdoctoral research fellows (2%), was willing to fabricate data for a grant application or a paper, while a significant percentage of participants (27%) was willing to select or omit data to improve the results.¹¹

A meta-analysis of surveys involving scientists' self-report of research misconduct showed that 0.3% to 4.9% of the scientists admitted that they had fabricated or falsified data at least once.¹² However, one could see that these numbers of those who "did it" are nevertheless lower than those who "would be willing to do," suggesting the difference between "perception" and actual "practice." Finally, researchers recommend the development of education in research ethics at universities, emphasizing the significance of vulnerable participants' consideration, responsible research conduction as well as clarification of Research Ethical Committees involvement.

DENTAL ETHICS AND SERBIAN UNIVERSITIES

The growing understanding of the nature and requirements of professionalism in dental medicine is changing the conception of dentistry, considering it as both health care and research activities. While the association between ethics and patient care is an obvious and important one, ethical behaviour is also necessary even before clinical experiences. Namely, there is a necessity to "incorporate" ethical behaviour among dental students in ways to address inappropriate ethical conduct among students and graduates. This way, teaching medical and dental ethics evolves with contemporary and acute topics such as cheating, alcohol use or sexual attraction to patients. In large, nowadays,

Dental Faculty in the Middle East: A Pilot Study," *International Journal of Dentistry* 2011 (2011): 694759.

¹¹ Susan Eastwood, Pamela Derish, Evangeline Leash, Stephen Ordway, "Ethical issues in biomedical research: perceptions and practices of postdoctoral research fellows responding to a survey," *Science and Engineering Ethics* 2 (1996): 89-114.

¹² Daniele Fanelli, "How many scientists fabricate and falsify research? A systematic review and meta-analysis of survey data," *PLoS One* 4 (2009): e5738.

it seems to be important to include dental ethics education in the undergraduate curricula in order for every dental graduate to adopt ethics as a responsibility towards providing the highest standards of dental care. In line with this, the Association for Dental Education in Europe (ADEE), as well as the American Dental Association (ADA), defined the necessary skills that a dentist should possess, including those that include ethical and professional behaviour. Noteworthy, Patrick¹³ pointed that the increased number of dental schools that included a course of ethics in dental curricula most certainly reflects the understanding that such practice resulted in producing well-rounded and professional dentists. In North America, from 91% of responding dental schools, which included at least one ethics course within their curriculum, 61 % of schools reported teaching ethics in the first year while around 40% in third and fourth years. Courses mainly were found to range from one to three credits. Odom and colleagues emphasize the need for an ethics course to begin in the first year in order to be applicable during student training in the next years.¹⁴ Noteworthy, although dramatic differences exist between schools regarding teaching hours and course content, positive results were evident.

The dental ethics education in Universities of Serbia is marginalized. None of the current curricula at Serbian Universities recognize dental ethics as a separate course. In the current curricula, the University of Novi Sad has medical ethics (and not dental, although there is evidence supporting that dental ethics faces different ethical issues) as a compulsory subject on the first year of undergraduate dentistry studies with a total of 45 hours. Dentistry studies at the Universities of Niš do not offer a separate course in ethics; instead, ethical issues are considered under the course “Medicine and society” with a total of 30 hours in the first semester of the studies. The University of Kragujevac recognizes ethics (but not dental ethics) as a compulsory subject in the first year of studies with a total of 60 hours. Surprisingly, the Dental school at the University of Belgrade does not recognize ethics as a course. Considering educational methods, lectures *ex-cathedra* is predominantly present (Table

¹³ Alison Patrick, “A review of teaching ethics in the dental curriculum,” e114-e118.

¹⁴ John Odom, Phyllis Beemsterboer, Ted Pate, Karl Haden, “Revisiting the status of dental ethics instruction,” *Journal of Dental Education* 64 (2000): 772-774.

1). One could easily conclude that this marginalization of dental ethics education could result in students perceiving ethics as unimportant.

Table 1. Courses of ethics in undergraduate curricula in Dental schools at Universities in Serbia

	University of Belgrade	University of Novi Sad	University of Niš	University of Kragujevac
Course in ethics	none	Medical ethics and sociology	Medicine and society	Ethics
Obligatory/ elective		obligatory	obligatory	obligatory
Year of studies		first	first	first
Number of hours		45	30	60
ESPB		3	2	4
Educational method		lectures	lectures	lectures

DENTAL ETHICS CURRICULUM

Today, contemporary teaching methods emphasize the importance of a more interactive mode that promotes introspection and self-knowledge, components of emancipatory and practical knowledge. Noteworthy, teaching ethics shows that advantage has to be given to practical and emancipatory knowledge instead of technical and scientific knowledge.¹⁵ Namely, practical knowledge recognizes communication and group problem-solving behaviours, while emancipatory knowledge recognizes self-reflection and ethical inspection. Results point that successful methods of ethics teaching are based on the formation of these forms of knowledge.¹⁶

¹⁵ Joan Whipp, Donald Ferguson, Linda Wells, Anthony Iacopino, "Rethinking knowledge and pedagogy in dental education," *Journal of Dental Education* 64 (2000): 860-866.

¹⁶ Nancy Berk, "Teaching ethics in dental schools: trends, techniques, and targets," *Journal of Dental Education* 65 (2001): 744-750.

Regarding optimal dental ethics curriculum, the recommendation is to create a balance between basic ethical and dental professional knowledge and behaviour by combining different methodological approaches.

Case-based learning has been strongly promoted in medical school ethics instruction. Namely, Perkins et al. suggested that teaching medical ethics should be via realistic patient cases.¹⁷ Indeed, many dental schools have endorsed this methodology showing its efficacy by means of capturing the students' attention and making ethics instruction more realistic and clinically applicable. Furthermore, the small-group learning format showed optimal results in the development of the student-instructor relationship and introspection. More importantly, this way, educators had an opportunity to serve as role models for their students regarding obeying ethical standards and behaviour.¹⁸ Medical ethics courses utilized problem-based learning (PBL) groups, which could be a successful approach for learning ethics in dental education. This should be associated with a narrative approach (e.g., stories) that could generate the optimal setting for student reflection. The use of the narrative approach enables the consideration of the overall context of ethical dilemmas in the clinical settings as well as consideration of the complex doctor-dental staff, or doctor-patient relationships and emotions.¹⁹ Particular attention should be put on the less obvious and unintentional messages sent by dental educators. Namely, these messages may have an important impact on the ethics experience as well, determining its significance. It is noteworthy that dental ethics educators should be aware of what has been said between the lines: if we close our eyes to exams cheating, if we do not penalize plagiarism or inappropriate behaviour towards colleagues or patients, what message do we send to our students?

On the other hand, in order to take an exam or finish the semester, students need to fulfil clinical requirements ultimately, and sometimes, that means that they will do "anything," including some ethical violations, to do the assignments. Do we then contribute to the ethical

¹⁷ Henry Perkins, Cynthia Geppert, Helena Hazuda, "Challenges in teaching ethics in medical schools," *American Journal of Medical Sciences* 319 (2000): 273-8.

¹⁸ Donald Dibbern, Eric Wold, "Workshop-based learning: a model for teaching ethics," *The Journal of the American Medical Association* 274 (1995): 770-771.

¹⁹ Anne Jones, "Narrative in medical ethics," *British Medical Journal* 318 (1999): 253-256.

dilemmas faced by students, just allowing them to do so? These “hidden” messages could certainly diminish ethics teaching efforts. The curricula of clinical subjects in Dental school in Belgrade comprise numerical tasks in order to achieve clinical competency (and graduation). This way, it is associated with the risk of the patient being perceived as intervention or number and of students putting first interventions and deadlines instead of the patient’s needs.

Thus, it seems that the role of the school has to be undoubtedly to obey and respect ethical grounds which proclaims. The major goal has to be optimal patient care, and therefore, mentors should be involved to track progress in clinical and ethical behaviour.

Altogether, evidence suggests that dental education should be a separate course, best to start before clinical training, while educational methods must include interactive mode with incorporated case studies as a method of teaching. The students should be engaged in lively classroom discussions regarding issues and cases that they comprehend as realistic and relevant to their current and future dental and scientific practice. There is also consensus among students regarding curriculum: intensive ethics course with small group format instead of exclusively didactic, involving review of everyday ethical dilemmas as well as ethical behaviour of mentors and superiors.²⁰ Regarding the clinical evaluation of students during course, ratings of student-patient interactions is the preferable method. Also, the educators as moderators could provide a forum for examining and discussing ethical issues with students. Nevertheless, we should not forget that as educators, we model the ethical behaviour of students, which adopt the standards of honesty and integrity while in dental school. Furthermore, teaching ethics should include common as well as not-so-common ethical issues encountered during everyday practice. Until recently, there was a suggestion that ethics teaching should be focused on the unusual and not-so-common cases of ethical dilemmas, but Truog and colleagues pointed to an often-missed consequence of mentioned approach- focusing on rare and controversial cases in order to demonstrate ethical principles. Namely, these authors suggested that by focusing on the not common cases, there is a risk of

²⁰ Thorsten Langer, Danny Jazmati, Ole Jung, Christian Schulz, Martin Schnell, “Medical Students’ Development of Ethical Judgment - Exploring the Learners’ Perspectives using a mixed methods approach,” *GMS Journal for Medical Education* 33 (2016): Doc74.

neglecting a number of ethical decisions encountered during the daily clinical practice.²¹

Ethics learning should be continued after graduate studies also, since continuing education in professional as well as in ethical behaviour is necessary for maintaining competency, regardless of the student's knowledge and skills. For example, Robin and Caniano found that while most paediatric surgery residents in the survey reported that they felt competent to handle conflicts in clinical practice, almost half of them did not accurately answer questions regarding usual ethical dilemmas involving children.²²

A course of medical ethics was not a part of the residency curriculum, although survey results support the efforts to continue with ethics education in the postgraduate period in order to refresh and widen the knowledge based on undergraduate studies. The tracking of the students' academic and practical activities might also provide valuable information on ethics educational programmes efficacy. Namely, it still is hard to validate ethics teaching outcomes, so assessments of ethical behaviour, including violations, could provide us with some insight into the impact of ethics learning on the ethical behaviour of students.

CONCLUSION

Although an excellent student in dental ethics does not necessarily mean an ethical dentist, a well-designed program of dental ethics education should provide clear principles and practical guidance on how to apply basic ethical principles of compassion, kindness and integrity into clinical and/or scientific practice. Dental ethics education adheres to fundamental academic values and aims to foster pride and honour in the dental profession.

²¹ Robert Truog, Stephen Brown, David Browning, Edward Hundert, Elizabeth Rider, Sigall Bell, Elaine Meyer, "Microethics: the ethics of everyday clinical practice," *Hastings Center Report* 45 (2015): 11–17.

²² Michael Robin, Donna Caniano, "Analysis of clinical bioethics teaching in pediatric surgery residency," *Journal of Pediatric Surgery* 33 (1998): 373-377.

REFERENCES

- Bebeau, Muriel and Davis Elizabeth. "Survey of ethical issues in dental research." *Journal of Dental Research* 75 (1996): 845-855.
- Berk, Nancy. "Teaching ethics in dental schools: trends, techniques, and targets." *Journal of Dental Education* 65 (2001): 744-750.
- Dibbern, Donald, and Wold, Eric. "Workshop-based learning: a model for teaching ethics." *The Journal of the American Medical Association* 274 (1995): 770-771.
- Eastwood, Susan, and Derish Pamela, Leash Evangeline, Ordway Stephen. "Ethical issues in biomedical research: perceptions and practices of postdoctoral research fellows responding to a survey." *Science and Engineering Ethics* 2 (1996): 89-114.
- Edelhoff, Daniel, and Sorenson John. "Tooth structure removal associated with various preparation designs for anterior teeth." *Journal of Prosthetic Dentistry* 87 (2002): 502-509.
- El-Dessouky, Hadir, and Abdel-Aziz Amr, Ibrahim Chadi, Moni Malini, Abul Fadl Reham, Silverman Henry. "Knowledge, Awareness, and Attitudes about Research Ethics among Dental Faculty in the Middle East: A Pilot Study." *International Journal of Dentistry* 2011 (2011): 694759.
- Fanelli, Daniele. "How many scientists fabricate and falsify research? A systematic review and meta-analysis of survey data." *PLoS One* 4 (2009): e5738.
- Jones, Anne H. "Narrative in medical ethics." *British Medical Journal* 318 (1999): 253-256.
- Langer, Thorsten, and Jazmati Danny, Jung Ole, Schulz Christian, Schnell Martin. "Medical Students' Development of Ethical Judgment - Exploring the Learners' Perspectives using a mixed methods approach." *GMS Journal for Medical Education* 33 (2016): Doc74.
- Odom, John, and Beemsterboer Phyllis, Pate Ted, Haden Karl. "Revisiting the status of dental ethics instruction." *Journal of Dental Education* 64 (2000): 772-774.
- Ozar, David. "Professionalism: challenges for dentistry in the future." *The Journal of Forensic Odonto-stomatology* 30 Suppl 1 (2012): 72-84.
- Patrick, Alison. "A review of teaching ethics in the dental curriculum: challenges and future developments." *European Journal of Dental Education* 21(2017): e114-e118.

- Perkins, Henry, and Geppert Cynthia, Hazuda Helen. "Challenges in teaching ethics in medical schools." *American Journal of Medical Sciences* 319 (2000): 273-8.
- Robin, Michael L., and Caniano Donna A. "Analysis of clinical bioethics teaching in pediatric surgery residency." *Journal of Pediatric Surgery* 33 (1998): 373-377.
- Truog, Robert, and Brown Stephen, Browning David, Hundert Edward, Rider Elizabeth, Bell Sigall, Meyer Elaine. "Microethics: the ethics of everyday clinical practice." *Hastings Center Report* 45 (2015): 11–17.
- Vučinić, Zorica, and Djukić Ljiljana. "The Regulation of Clinical Trials in the Republic of Serbia." *Hospital Pharmacology* 2 (2015): 322-327.
- Whipp, Joan, and Ferguson Donald, Wells Linda, Iacopino Anthony. "Rethinking knowledge and pedagogy in dental education." *Journal of Dental Education* 64 (2000): 860-866.

ERRATUM: The new curricula of integrated academic studies in dentistry (from 2021) at the University of Belgrade and the University of Novi Sad include the following new courses in ethics: Professional ethics in Dentistry, as an elective course on the third year with a total of 60 hours (Belgrade), and Ethics in Dental medicine as obligatory course on the first year with a total of 30 hours (Novi Sad). At the University of Kragujevac, the 2018/19 curriculum presents Ethics as an elective course with 30 hours of lectures. Data were not available for the University of Pristina.